



EUREKA

Project Overview and Client Case Studies

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Version 3

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The Digital Development Unit

The DDU has a strong track record of assisting Blackburn with Darwen based small to medium sized businesses, start ups and inventors to develop their ideas and to be more competitive through the effective exploitation of technology and innovation. The service is impartial and is delivered by an experienced team.

The Eureka strand of the No Limits initiative enables this support to be made available to the wider Pennine Lancashire area of Pendle, Burnley, Hyndburn and Blackburn with Darwen. This support is offered in partnership with the respective borough councils and a range of other partner and support organisations involved in the delivery of the wider No Limits strands and other schemes.

The support ranges from initial information and awareness activities such as seminars, through to in depth specialist support and partial financial assistance to effect innovative change. Examples include, but are not limited to, information technology, software development, networks, mobile solutions, web sites and related e-business implementations, product development, manufacturing and other process innovation.

This portfolio of case studies presents examples of different types of projects from across Pennine Lancashire. Projects range from ICT/e-business projects, process innovations through to new product development work. The portfolio is not an exhaustive list of the types of support available. Within the broad parameters of innovative change and the requirements of the No Limits programme, the aim is to keep the funding as flexible and responsive as possible in order to meet the needs of local businesses and residents.

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Product Development

Lomax Offshore Couplings Ltd – Accrington

Background

The company's products are used in the offshore oil industry and connect outputs from a control panel on the sea bed to a control panel on an oil rig via an umbilical cord. Each order from the oil rig operators requires a unique configuration of couplings dependent on the application of the control panel. Each configuration of coupling is housed in a stab plate to facilitate the connection of the couplings to the control panel. The stab plates are fitted to the control panel by either a deep sea diver or more frequently now by ROV (remotely operated vehicle). Each mode of fitting requires a differently designed stab plate.

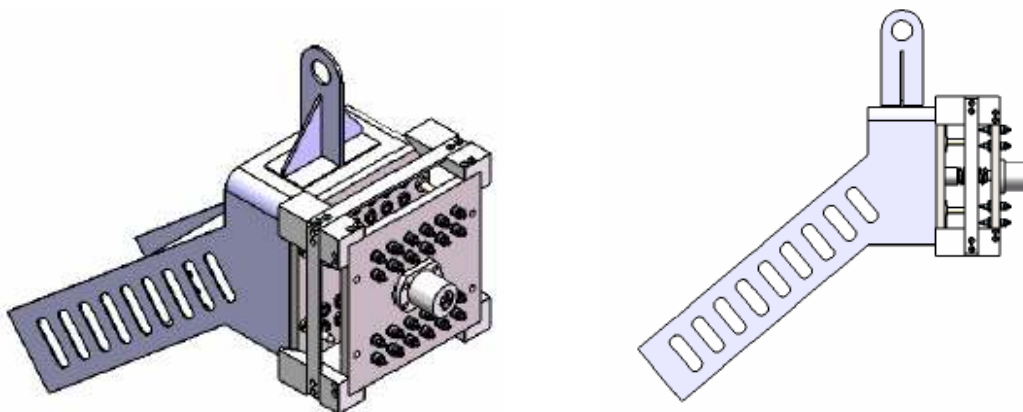
The Project

Lomax could only offer diver fitted stab plate designs. This was restricting their opportunities in the market, as an increasing number of new oil fields are at depths that prevent the use of divers. As part of their growth strategy the directors decided they needed to offer a remotely operated vehicle fitted stab plate. As Lomax didn't have an in house design facility, it decided to commission a design consultant to undertake this task.

An innovation & technology advisor from the DDU helped the company to source a suitable design consultant and helped to produce a programme of work. The Eureka project made a partial financial contribution towards the costs of the external design expertise.

Outcome

Justin Birtwistle Managing Director of Lomax commented, 'the support from the DDU has allowed us to redesign the stab plate much more quickly and to compete much more favourably in our market place'. We expect an increase in sales to follow.



ROV (Robotic Operation Vehicle) Stab Plate

Louvre Tie UK Ltd – Burnley

Background

Louvretie UK Ltd was registered by David Howarth in October 2008, with an aim to wholesale a new and unique tie-back product, specifically designed and tested for vertical window blinds. The benefit of this product is, for example, when a window is open it prevents the blind rattling. It also enables easy cleaning of the windows and allows greater light to flow in if the blinds are tied back.

The company had one patent pending initially, and a plan to sell the product both to the trade and as a retail item by website or mail order. A small trial tool was commissioned by David.

The Project

Market reaction was encouraging, and sales commenced on a small scale. In its original form, the product had two components, the main blind receiver and a separate slot-in base, but the market asked for a second version which will cater for all possible situations.



David approached the No Limits Burnley Enterprise Haven for help and received support through the No Limits Get Set start up business project. He attended the “Enterprise Island” training event, where he was introduced to the No Limits Eureka scheme. Eureka has assisted him to commission 3D CAD solid models to facilitate tool making, strength analysis of the design, and illustrations for registered design and marketing purposes. Further assistance has been given with a prototype injection moulding tool, and a display stand. Part funding has been awarded by Eureka towards the work.

Eureka has also assisted Louvretie to prepare a patent application to cover the new design and the company intends to use Eureka assistance to upgrade its present brochure type website to a full e-commerce site as soon as funds allow.

Outcome

On the strength of these developments, a first sale of 5,000 units has been made to a large supplier of window furnishings to the trade, with predictions of two more orders in 2009.

Poopsta – Lower Darwen

Background

The Poopsta is a simple but very efficient innovation in collecting dog waste. It is essentially a plastic dome and the collection is powered by a humble elastic band. Father and son team Richard and Maurice Glynn has spent several years' part time work to develop the product.

A plastic bag is placed in the Poopsta and the Poopsta is then pushed over the waste with the elastic band released by pulling a trigger to collect and tie up the waste. The product incorporates a shoulder strap and an in-built retracting lead which always leaves one hand free, unlike other products on the market.

The Project

Eureka with its Ideas Works project has helped Richard and Maurice work with the University of Central Lancashire to refine the design of the plastic to make it lighter and cheaper and the tooling less expensive. A company in Lower Darwen was located that could manufacture the Poopsta and also act as a warehouse and delivery centre. Eureka has part funded the tooling and the first prototypes for evaluation. We have also helped with the formulation of the legal contract for the sub-contract manufacture and have proposed a quality control scheme.



*Richard Glynn
demonstrates the
Poopsta*

Outcome

We have identified a number of websites selling dog-related products and have worked with Richard and Maurice Glynn to agree an “affiliate marketing scheme” where an organisation, whether a distributor or, for example, a veterinary practice, will keep samples of the product and act rather as a sales agent than a stockist, and for each Poopsta sold through their referral, £2 commission is paid to the referring organisation.

The tooling and manufacture of the pre-production prototypes will be in early May 2009 with samples going out to targeted dog interest websites and magazines.

Radical Technologies - Colne

Background

Radical Technologies was established by John Ridehough in 2008 after a lifetime in engineering management. He has always had more ideas than time to develop them, and took the opportunity offered by two engineering businessmen to fund a company to develop the best of his ideas. This was the birth of Radical Technologies.

The Project

John Ridehough and his colleagues at the company have developed a novel gripper for the end of robot arms. This uses many standard parts, meaning maintenance is simple and low cost, and, instead of a linear activator through compressed air, it uses a rotating principle. There are two types – one which uses a pair of rotating interlocking, segmented clamps and the other which uses an innovative cam device. Radical Technologies has come up with a lighter, cheaper and more accurate gripper mechanism than those at present on the market. They felt it would offer similar or superior capabilities to existing products which are largely monopolised by German manufacturers.

The Eureka programme helped identify how to calibrate the forces that the new design provides. Professor Derek Steward at Lancaster University did empirical tests and devised algorithms that could calculate the gripping forces from the dimensions. This was essential to establish dimensions of four sizes of grippers which would exactly match the four most popular sizes at present on the market from other manufacturers.

The Eureka Programme provided part funding for the initial four prototypes to be made and tested out in real situations.

The benefit of the new design is that it costs less, uses many standard off-the-shelf components, making it easier to maintain and lighter for equivalent strength of grip than the current competitive alternative. We have also helped with advice in setting up a marketing company to exploit this new design.



*Small size gripper
arm, jaws towards
the camera*

Outcome

We are pleased to report an initial sale of 24 grippers for a solar panel handling application and that a distributor of robot accessories in Darwen is taking a close interest in the product. Pendle-based Radical Technologies are now up and running with a unique high-value product which looks to be fulfilling its promise and should lead to new highly skilled jobs in the area.



*The largest gripper arm –
actuating pneumatic
motor at the back with jaw
slides at front*

Distributed Management Systems (DMS) Ltd – Blackburn

Background

Distributed Management Systems was founded initially as a software house by its current Managing Director, Basil Philipasz. Following successful innovation and patents, the focus of the company is the strong authentication software technology known as CASQUE. The company has an innovation strategy to exploit its own intellectual property by integration with and augmentation of the major security software systems. CASQUE enables access control to remote servers; it provides multi-factor, strong authentication together with the management and distribution of the necessary keys for its active, physical, tokens.

The Project

Though the software development was done entirely in-house, DMS approached the Digital Development Unit for assistance with the design of the physical token, and were advised and part-funded for the design and rapid prototyping and trial tool making to produce the injection moulded case. Though experts in the electronics and software aspects of the design, the company had little knowledge or experience of the design of enclosures, and were led through these aspects by a specialist advisor from the DDU.



CASQUE Token

Outcome

The new solution is unique. It is independent of any workstation – and users can roam and access servers through Windows clients or browsers. CASQUE uses physical, active, optical tokens that can use any light-emitting screen and cannot be successfully cloned.

The core technology in CASQUE has been independently and intensively examined by prospective customers. It has been accredited for use by UK Government Departments by CESG (Communications Electronics Security Group), the UK Government's Information Security Authority and certified as a pre-approved security product for use by the UK Ministry of Defence.

The company has won a UK GRAND Research Grant to examine the feasibility of extending the technology to provide complete end-to-end solutions where CASQUE will assure secure communication across extensive and diverse networks.

This has resulted in an extended technology which has been named CASQUE-ESRAS which can cope with a variety of threats from theft of the physical workstation or token to the most sophisticated software attacks.

In 2008, DMS supplied 300 CASQUE tokens to the Royal Air Force for remote access to restricted sites.

"We were fortunate to receive a grant from DDU to build an experimental electronics test bed to research various sensor devices for our security token. The financial support and encouragement from the DDU team were important in accelerating our development for which we remain grateful. The true testament is our recent commercial success" – quotes Basil Philipsz (Managing Director, DMS Ltd).

Process Innovation

BCW Engineering Limited – Burnley

Background

BCW Engineering Ltd was formed in 2002 by Alec Cassie and Paul Briggs. Both had been directors of the Hyde Group and had been made redundant some months earlier. The company has grown quickly since formation. The core business is sub contract precision machining and assembly particularly for the Automotive and Power Generation sectors. Current customers include Jaguar, Helical and Kiddie. The company recently agreed a joint venture in India to access international markets and provide low cost manufacturing facilities for high volume output.

The Project

Although the company has enjoyed major success in sales and profit growth since its formation this success has been achieved using disparate pieces of software and Excel based spreadsheets to manage production processes. The directors realised that their growth strategy couldn't be achieved using their existing systems without compromising control and operational efficiency.

The directors decided to install a new business management system as part of their strategy to grow and develop the company. The DDU worked with the company to formulate a requirements specification including:

- i) Integration of the production management system with other business systems
- ii) Scheduling of works orders based upon capacity planning labour content of sales with production resources.
- iii) Work tracking the progress or works orders based upon a computerised data capture system.
- iv) The valuation of raw material, WIP and finished part stock interfacing with materials purchase orders.
- v) Reporting on: productivity, conformance, suppliers and budgets

The DDU worked with the company to decide how best this should be delivered and Profit Optimiser Enterprises Limited was commissioned to undertake the work. The DDU helped the company apply for funding to enable the project to go ahead. The project involved a significant amount of specialised customisation and integration.

Outcome

Since the project was completed in August 2008, 19 new jobs have been created and 14 existing jobs have been safeguarded.

As Paul Briggs, a director of BCW commented "the support we have received from the DDU has helped us to bring more structure and control to the business and allowed us to expand both turnover and headcount."

Precision Polymer Engineering Limited – Blackburn

Background

Precision Polymer Engineering Ltd (PPE) is a specialist manufacturer of elastomer (rubber) seals used in a wide variety of industries but generally always at the high end of technology for example pharmaceutical equipment, turbines for marine and power generation, semiconductor equipment for the manufacture of memory chips and aerospace. During the last five years the company has achieved a growth rate of some 25% per annum and exports 80% of its products. The DDU has been involved with the company supporting projects which have contributed towards to this growth.

The Project

PPE's product offering can be best described as static low pressure seals commonly known as 'O' rings. The directors identified that future growth could not come from this product range alone and planned to introduce a select range of high performance seals and bearing geometries to market. These would be higher in value than traditional 'O' rings and command a higher margin and market potential.' To do this successfully they needed to automate the design process. The DDU helped the company to decide on the best way forward to achieve this.

The existing method of processing orders was to generate design standards, tabulate prints and manually create drawings and enter into the Enterprise Resource Planning (ERP) system for every item quoted. This process required some 6 man hours to complete over about 1 week.

In order to launch the new product range successfully, the company needed to reduce their response time to customer orders and enquiries. To achieve this objective, the order processing needed to be automated with the aim of reducing the time to half a day with only 10 minutes labour.

The system structure for the new automated process required 2 pieces of bespoke software to be integrated between the existing Solid Works CAD system and the Syteline ERP system.

Support from the Eureka project helped the company to commission the required expertise to integrate the bespoke custom programming platform and interface to enable automated drawing, data generation, routing and bills of materials together with a link to an automatically generated design drawing.

Outcome

Since the start of the project 14 new jobs have been created in the company and 19 existing jobs safeguarded.

Mick Holland, Global Production Manager commenting on the assistance given by the DDU, "The support has enabled us to start horizontal diversification in the company's international markets which will lead to further increases in turnover and staffing levels".

Granby Marketing – Blackburn

Background

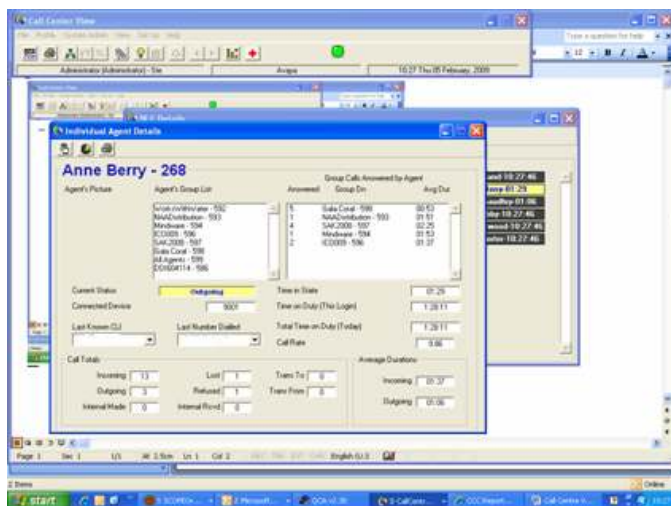
Granby Marketing provide brand support services, offering a range of integrated multi-channel contact, handling and fulfilment services to blue-chip clients, promotional marketing companies and public sector organisations.

The services include; intelligent customer service, contact call centre, outsourcing fulfilment, high volume promotional response management or point-of-sale kit assembly and distribution. Their operating system gives real time access to a suite of on-line reports; so that clients can view campaign response figures or check on stock position.

The Project

The company approached the DDU to assist with identifying and overcoming barriers to growth. They recognised the call centre activity as having significant growth potential and after a 5 week telemarketing program they were seeing a growing pipeline of enquiries. To capitalise on this they needed to upgrade the call centre hardware and software package.

Call centre technology has developed greatly since their original system was purchased and the marketplace now demands full recording and access to real-time call statistics. Now the call centre has evolved into a multi channel full contact centre, capable of dealing with any form of customer interaction, from a call or email through to a text or web chat. Funding towards the cost of the capital equipment components was sought from the No Limits, Finance for Growth project.



The reporting function of the new call centre solution

Outcome

The DDU assisted the company to ensure that the quotation met the complex requirements of the business. The cost of the bespoke reporting tool configured to complement the company's online reporting tool was supported by the DDU in January 2009. Significant growth in turnover is anticipated from this investment in the first year. It is hoped that this activity will increase jobs at the company by 10.

Crown Cabinets - Burnley

Background

Crown Cabinets manufacture kitchen and bedroom furniture carcasses. The directors are building the business with a strong emphasis on quality and customer satisfaction. They have invested in a wide range of equipment and machinery including a state of the art CNC panel sizing centre. The machine works from full sheets, cutting panels and machining all the necessary holes.



The Project

To optimize the efficiency of the investment in new machinery, a unified operator interface and office CAD/CAM system was needed which had to be modified to meet Crown's specific needs. The system interfaces with furniture planning programmes to convert a plan into complete cutting list, nested into sheets for optimum material usage whilst using parametric programs. These programs give a reference for the machining operations to the dimensions of the panel, instead of absolute positions of a single panel. This enables any dimensional changes to cascade associated amendments through to all components automatically.

The company approached the DDU for assistance in the drafting of a detailed requirement specification and financial support towards the cost of the system. The machines were installed during January 2009 and the optimizing software was fully operational by the end of February.

Outcome

The benefits of these investments will be to;

- Improve efficiency, reduce scrap and work in progress, resulting in increased GP
- Optimise upstream processes in the ordering system, quotations and component feasibility.
- Generate a full costing report for faster and more accurate pricing, safeguarding profit margins due to changes in material cost.
- Store in its memory details of usable off-cuts from previous jobs and recall them for use when appropriate.
- Enable the company to capitalise on the growth potential from increased sales resulting in a requirement for 5 people.
- The company has already seen an increase in productivity and a positive material yield variance.

ICT/e-Business

The Neve Clinic - Burnley

Background

The Neve Clinic is a newly formed clinical partnership of Osteopath, Chiropractor and Holistic support therapists. The clinic provides a holistic approach to supporting patients for pre and post-operation, lifestyle, sports injury and other clinical support. They have a wide spread practice and attract clients from the East Lancashire area and are developing the business so that it can cater for referrals from the North West.

The Project

One of the partners has a practice in Kent and spends time each week in that practice. The Neve Clinic needed a workable mobile computing solution to provide shared diaries, finance co-ordination and client file access to from a Content Managed System (CMS) based web site. The clinic required a web site to attract new clients, help support existing clients and allow access to client management and diary bookings on line. The site would also provide advice and support; news and latest practice information.

Following consultation and assistance from the Digital Development Unit the Neve Clinic has invested in a content managed web based diary and appointments system. The DDU also assisted the Neve Clinic to source a supplier capable of developing a CMS based web site; produce a bespoke Client Relationship Management (CRM) system and providing the mobile computing technology for secure remote access to confidential client information. The clinic partners can now access their system via laptop, PCs and Blackberry devices anywhere in the world.

Outcome

The new system allows the clinic partners and clients to access and book appointments and provides treatment history and client information via secure log-in on the web site, which can be viewed from any internet connection. This has made a significant difference to the way the business operates and is a good example of the effective use of mobile technology.



Site URL/Domain: <http://www.theneveclinic.co.uk>

Silicone Engineering – Blackburn

Background

Silicone Engineering has been trading since 1960 and has a turnover of £8.9m employing 100 staff. The business manufactures and distributes specialist silicone products from flat sheet to moulded profiles and tubing. These products are used for a large variety of purposes in the aerospace, vehicle medical and chemical industries.

The Project

Due to increasing international competition, reducing margins and income Silicone Engineering has developed a new pro-active marketing strategy, which includes influencing the supplier choice of end users. Silicone Engineering is now pursuing a highly visible active marketing and digital marketing strategy to drive international business to it and its distributors. This strategy required the replacement of the old static web site with a function rich e-business site which would form stage one of a two stage integrated e-business system. Following consultation with the Digital Development Unit the identified requirements were: full content management system; registration and log-in capability; marketing database collation; e-mail marketing, campaign management; on-line order processing, tracking and customer service

Outcome

With the Digital Development Unit support Silicone Engineering Ltd commissioned a web site to provide them with a dynamic and active digital marketing platform which will integrate with a “back office” system at a later stage.

The marketing and sales team were aware of the need for additional functions to make the site useful for marketing and as a dynamic lead generating site which supports other marketing media.

To handle trade enquiries the site has a registration and login section with access to technical papers, an enquiry form and tender/design wizard.



Site URL/Domain: <http://www.silicone.co.uk>

Arthur Padgett Plumbers Ltd - Nelson

Background

Arthur Padgett & Sons is a long-established successful family-run plumbing business based in Nelson. The company is in its third generation of Padgett's and has expanded considerably over recent years. The owners are forward looking, having invested in computer systems for the office to give better control.

The Project

The company turned to the DDU for help in two areas – an up to date web presence with two websites and a diary/database system with integration to their accounting system.

The DDU was able to provide advice, guidance, help with identification of appropriate suppliers and funding for the project.

Outcome

The solution has moved the business forward from a marketing point of view and improved efficiency and control in the office.

The two web sites are linked, providing two distinct means of being found on the Internet. The main site enables the company to be found for the normal range of plumbing by companies, councils and members of the public.

The new “Green Heating” website is aimed at builders, architects and companies, putting Padgett's in the forefront of ecological heating for homes and businesses; covering solar water heating, air pumps, ground pumps, biomass boilers and under floor heating.

The database / diary system improves efficiency, minimising input and enables much better control of jobs, quotations and invoices. The diary system makes organising jobs easier and increases visibility, improving service to the customer. The integration with the company's QuickBooks accounting system minimises input and eliminates duplication.



Site URL/Domain: <http://www.arthurpadgett.com>



Site URL/Domain: <http://www.greenheatingsystems.co.uk>

Auto Spares Compare - Blackburn

Background

Auto Spares Compare is a new company that has received support via the No Limits Get Set programme for start up businesses. The aim was to establish an online automotive spares directory, enabling customers to locate car spares via a network of part suppliers and dismantlers across the country. The Directors are experienced in the part supply business and did considerable research in identifying a niche, signing up suppliers, identifying weaknesses in competing websites and agreeing a pricing structure that would undercut the opposition and still provide a healthy profit. The company received start up support via the No Limits Get Set programme.

The Project

With the help of the DDU, the company commissioned a very complicated website that has considerable vehicle search facilities, news feeds, news letter and email facilities

Outcome

The site provides a conduit between people requesting spares for cars and large commercial part suppliers and dismantlers who need an outlet for their parts. The site is fully content-managed and is optimised for a range of appropriate key words for the search engines.



Site URL/Domain: <http://www.autosparescompare.com>

Thingimijigs – Burnley

Background

Thingimijigs is a Burnley based company that specialises in the retail of children's gifts and toys, especially boys & girls licensed character toys. They are official retailers of several famous character lines and over 4 years of trading have built the business up steadily. The business has turned over the majority of its business through Ebay and Amazon. This has enabled the client to build up the company and negotiate favourable deals with its suppliers.

The Project

When the client approached the DDU they already had a website but this was designed from an off the shelf e-commerce package and had reached the technical limits of the system and the client. With a lack of order processing and reporting functionality, limited visibility on search engines and time consuming editing the client felt a new solution was needed to exploit this market and expand the business further. The client also wished to conduct e-marketing such as direct emailing but had no solution for this at present.

Outcome

With support from the DDU the client has developed a professional content managed and e-commerce enabled website that will allow them to sell products online and more closely manage their order process. The design of the new Thingimijigs website means that customers are now attracted visually from the minute they reach the site and can easily navigate through the different character and product ranges. In turn the company now has the statistics to see where site visitors come from, enabling targeted marketing campaigns to attract new customers. By marketing to their existing customer base the website saw a healthy trade from launch and this formed a firm turnover to enable the client to look towards making more impact with search engine traffic through ongoing optimisation and Google Ad words campaigns.



Site URL/Domain: <http://www.thingimijigs.co.uk/>

Clartech Business Communications – Blackburn

Background

Clartech is a communications company specialising in business based mobile and land line applications where the client can develop and maintain communications systems for their customers. The firm has grown strongly since it started but the client felt that the company needed to promote itself with a corporate identity.

The Project

The client also wished to begin a promotional and direct marketing strategy using the website as a delivery method. As well a promotional tool the client felt there was an opportunity for the website to generate revenue via online sales. Generic items such as car kits, satellite navigation, and accessories could be sold on the website. As well as generating new income this would also function for existing customers and encourage repeat business or up selling.

Outcome

The DDU has assisted this project by providing advice and funding with developing a professional e-commerce website to meet these business needs. As a growth strategy for the client the site will perform as a promotional tool to gain contracts and increase customer confidence in the earlier stages and then, once established within the search engines, become a more direct selling tool through its e-commerce functionality. Although still in this early stage the site is being actively driven and heading down the growth path.



Site URL/Domain: <http://www.clartechbusiness.com/>



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